



PCT

**(10) International Publication Number**  
**WO 2005/099172 A1**

**(81) Designated States (unless otherwise indicated, for every kind of national protection available):** AF, AG, AI, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

**(84) Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**  
— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

COMMUNICATION MEDIUM OF A MOBILE ADHOC NETWORK

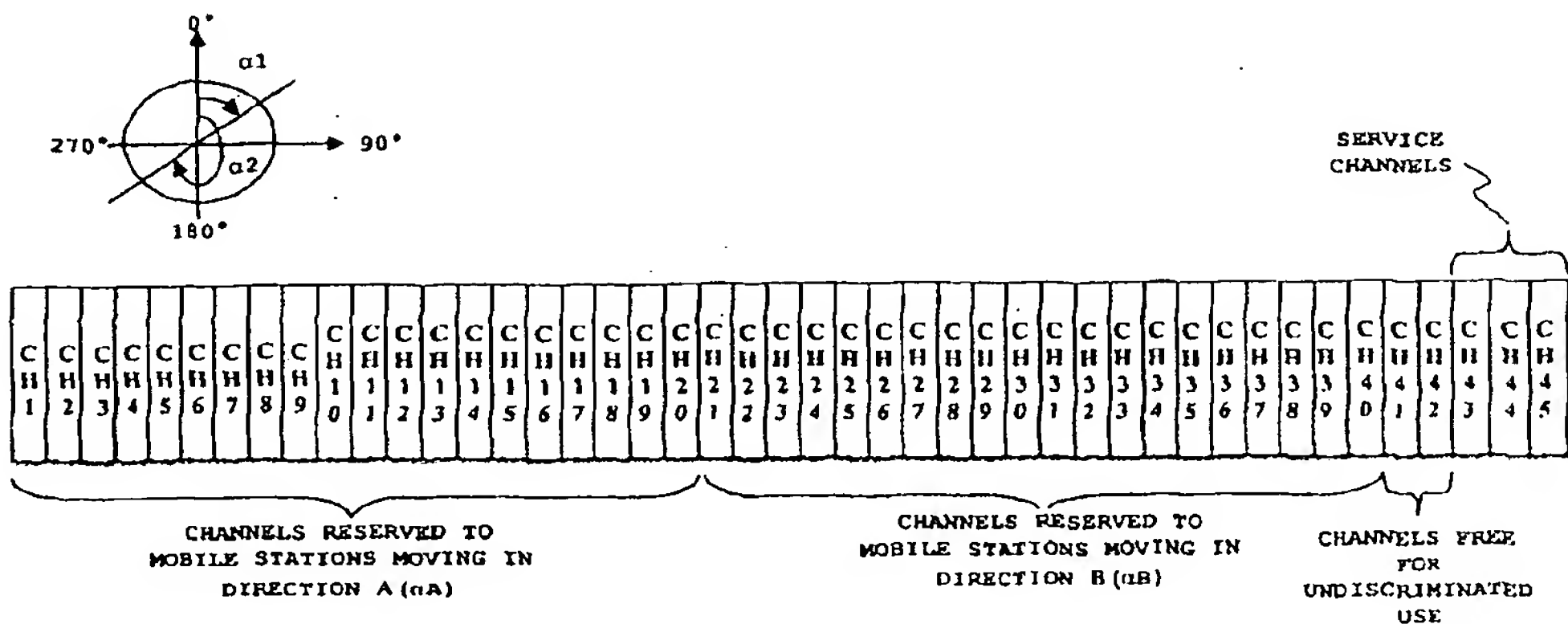
Diagram illustrating the allocation of channels for mobile stations moving in Direction B (MB) and channels free for indiscriminate use.

Channel Number	Channel Label
1	C H 2 4
2	C H 2 5
3	C H 2 6
4	C H 2 7
5	C H 2 8
6	C H 2 9
7	C H 3 0
8	C H 3 1
9	C H 3 2
10	C H 3 3
11	C H 3 4
12	C H 3 5
13	C H 3 6
14	C H 3 7
15	C H 3 8
16	C H 3 9
17	C H 4 0
18	C H 4 1
19	C H 4 2
20	C H 4 3
21	C H 4 4
22	C H 4 5

Channels 1 through 12 are reserved for mobile stations moving in Direction B (MB). Channels 13 through 22 are free for indiscriminate use. Channels 13 through 20 are also designated as service channels.

**(74) Agents: MACCALLI, Marco et al.; Maccalli & Pezzoli S.r.l., Via Settembrini, 40, I-20124 Milano (IT).**

(54) Title: CONTROLLING ACCESS TO A SHARED COMMUNICATION MEDIUM OF A MOBILE ADHOC NETWORK



**(57) Abstract:** A method Of controlling access of mobile users (1050,105a2,1050,105b1,105W) of a substantially infrastructure-less communications network to a shared communication medium, wherein the shared communication medium is partitioned into a plurality of individual communication channels (CH1-CH42) that can be individually exploited for communications between the network users. the method comprises determining the existence of at least one main direction of movement (A,B) of the network users, the main direction of movement being a direction around which directions of movement of a prescribed number of network users are clustered; associating a group (CH1-CH20,CH21-CH40) of communication channels within the plurality of communication channels to the at least one main direction of movement; and reserving the communication channels of said group to the network users moving substantially in said main direction of movement.